AMENDMENTS TO THE DRAWINGS

The attached sheet of drawings includes changes to Figures 3 and 4. This sheet, which includes Figures 3-4, replaces original sheet including Figures 3-4.

The changes to Figures 3 and 4 include identification of SEQ ID NOs.

Two replacement sheets included.

REMARKS

Claims 1-37 are pending in the application. Favorable reconsideration in light of the amendments, the new claims, and the remarks which follow is respectfully requested.

Information Disclosure Statement

Regarding the IDS filed July 21, 2004, the Examiner contends that the Japanese patent publication is in Japanese and not considered since a copy of a translation was not provided. However, Applicants provided a partial English translation (indicated by the "P" in the appropriate box of the IDS). Enclosed with this Reply is another copy of the partial English translation. Consideration of the partial English translation is respectfully requested.

Objection to the Abstract

The Abstract has been objected to legal language. A new Abstract is submitted herewith with the changes requested by the Examiner.

The Drawings

The drawings have been objected to for not identifying SEQ ID NOs. Enclosed herewith are revised drawings, specifically Figures 3 and 4 have been amended to show the SEQ ID NOs. Support for the amendment exists in the specification. It is not believed necessary to amend Figures 1 and 2 since these drawings are provided, in part, to show the relative nucleotide alignment of known sequences.

The Obviousness Rejection

Claims 24, 25, and 35 have been rejected under 35 U.S.C. § 103(a) over Saulle in view of Lowe et al. Saulle et al relates to mitochondrial genes encoding ATPase8. Specifically, Saulle et al merely teaches a nucleic acid sequence of a region encoding

ATPase8. However, this region is relatively variable between animal species. Saulle et al further teaches that a relatively conserved portion is present within the region encoding ATPase8 (page 3398, right column, third paragraph). Although the sequence of a ruminant deer is disclosed in Saulle et al, it would NOT have been obvious to one skilled in the art to identify that the sequence can be used for detecting a ruminant other than deer.

In order to identify a primer to detect DNA derived from a ruminant, it is required that the primer has (i) a specific portion of the entire genome sequence, (ii) a specific length of the sequence, and (iii) a specific combination of these sequences. Saulle et al does not teach or suggest that the ruminant deer sequence can satisfy the three above mentioned requirements for the primer. Thus, even if the complete nucleic acid sequence to be detected is known as taught by Saulle et al, one skilled in the art would NOT have selected (i) a specific portion of the entire genome sequence, (ii) a specific length of the sequence, and further (iii) a specific combination of these sequences.

Furthermore, another deficiency of Saulle et al is that Saulle et al does not teach or suggest whether or not the ruminant DNA can be actually detected without detecting DNAs other than the ruminant DNA.

The Examiner contends that one skilled in the art would have used the software of Lowe et al on the genes of Saulle et al to generate primers, and thus render the invention obvious. However, Lowe et al merely discloses a computer program for rapid selection of preferable primers for polymerase chain reaction to amplify a target sequence effectively. It is apparent that a target sequence is a defined sequence from the description "the user enters the file name of the target sequence. ...to choose the range .... of the primer search" at page 1758, left column, last full paragraph. That is, it is possible to select and design preferable primer sequences by using the computer program disclosed by Lowe et al ONLY in the case where a target sequence to be amplified and detected is determined. Thus, in order to run the computer program as

disclosed by Lowe et al, one skilled in the art must have selected a specific region (i.e. target sequence) amplified by a specific primer pair for detection of ruminant DNA.

As long as the target sequence to be amplified cannot be selected appropriately, even if the known nucleic acid sequence as taught by Saulle et al is combined with the step of generating and designing primers as taught by Lowe et al, the specific combination of primers of the claimed invention could not be obtained by those skilled in the art.

For example, in Table 1 at page 18, Table 2 at page 20, and Table 3 at page 23 of the present specification, the wording "not shown" means that the combination of primers could not detect specific DNA, which indicates that there are primer pairs that cannot be used to detect the target animal species-derived DNA. These tests results indicate that even if any primer pair is prepared based on any known nucleotide sequence, all of the primer pairs cannot always detect the target animal species-derived DNA appropriately, or all of the primer pairs cannot always detect only the target animal species-derived DNA specifically.

Furthermore, as shown in Fig. 4 of the present specification, although the combination of rumicon5 and rumicon3 is designed at almost the same position as that of cow5 and cow3, the detectable animal species are different each other. That is, by the combination of rumicon5 and rumicon3, a broader animal species, ruminants such as cattle, goat, sheep deer, can be detected, but by the combination of cow5 and cow3, only cattle can be detected. Thus, to determine the specific combination of the primers, undue experimentation with trial and error is required.

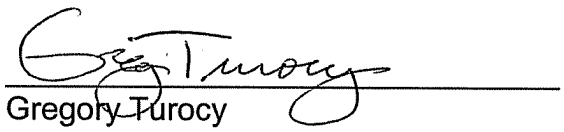
Therefore, it would NOT have been obvious to a person of ordinary skill in the art to combine the known nucleic acid sequence as taught by Saulle et al with a step of generating primers and designing primers as taught by Lowe et al to amplify and increase the primer specificity and to detect a ruminant-specific DNA. Withdrawal of the rejection is consequently respectfully requested.

Should the Examiner believe that a telephone interview would be helpful to expedite favorable prosecution, the Examiner is invited to contact Applicants' undersigned attorney at the telephone number listed below.

In the event any fees are due in connection with the filing of this document, the Commissioner is authorized to charge those fees to our Deposit Account No. 50-1063.

Respectfully submitted,

AMIN, TUROCY & CALVIN, LLP



Gregory Turocy
Reg. No. 36,952

24th Floor
1900 East 9th Street
Cleveland, Ohio 44114
(216) 696-8730
Fax (216) 696-8731